AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

1. (currently amended): A light-emitting field-effect transistor including an organic semiconductive layer having an electron affinity $EA_{semicond}$; [[and]] an organic gate dielectric layer forming an interface with the organic semiconductive layer; ~~characterised in that~~ and an electron-injecting electrode and a hole-injecting electrode arranged for travel of change carriers along the interface between the organic semiconductive layer and the gate dielectric layer; wherein the bulk concentration of trapping groups in the organic gate dielectric layer is less than $10^{18}cm^{-3}$, where a trapping group is a group having (i) an electron affinity EA_x greater than or equal to $EA_{semicond}$ and/or (ii) a reactive electron affinity EA_{rxn} greater than or equal to $EA_{semicond.}$-2eV, ~~that is capable of emitting~~ and wherein the transistor emits light when operated in a biasing regime in which negative electrons are injected from [[an]] the electron-injecting electrode into the organic semiconductive layer, and positive holes are injected from [[a]] the hole-injecting electrode into the organic semiconductive layer.

2. (original): A light-emitting transistor according to claim 1, wherein the transistor is an ambipolar field-effect transistor.

3. (previously presented): A light-emitting transistor according to claim 1 wherein $EA_{semicond.}$ is greater than or equal to 2eV.

4. (original): A light-emitting transistor according to claim 3 wherein $EA_{semicond.}$ is in the range of from 2eV to 4eV.

5. (previously presented): A light-emitting transistor according to claim 1 wherein the organic gate dielectric layer comprises an organic insulating material and the organic insulating material does not contain a trapping group.

6. (previously presented): A light-emitting transistor according to claim 1, wherein the organic insulating material does not contain a group having (i) an electron affinity EA_x greater than or equal to 3eV and/or (ii) a reactive electron affinity EA_{rxn} greater than or equal to 0.5eV.

7. (previously presented): A light-emitting transistor according to claim 6 wherein the organic insulating material does not contain any one of the following groups: a quinone, an Ar–OH group, an R–COOH group, an Ar –SH, and an Ar-COOH group, wherein Ar is an aromatic group and R is an aliphatic group.

8. (previously presented): A light-emitting transistor according to claim 6, wherein the organic insulating material contains one or more groups selected from alkene, alkylene, cycloalkene, cycloalkylene, siloxane, ether oxygen, alkyl, cycloalkyl, phenyl, and phenylene groups.

9. (previously presented): A light-emitting transistor according to claim 5 wherein the organic insulating material comprises an insulating polymer.

10. (original): A light-emitting transistor according to claim 9, wherein the insulating polymer is selected from the group consisting of substituted and unsubstituted poly(siloxanes) and copolymers thereof; substituted and unsubstituted poly(alkenes) and copolymers thereof; substituted and unsubstituted poly(styrenes) and copolymers thereof; and substituted and unsubstituted poly(oxyalkylenes) and copolymers thereof.

11. (original): A light-emitting transistor according to claim 10, wherein the backbone of the insulating polymer comprises a repeat unit comprising $-Si(R)_2-O-Si(R)_2-$ where each R independently is methyl or substituted or unsubstituted phenyl.

12. (previously presented): A light-emitting transistor according to claim 9, wherein the insulating polymer is crosslinked.

13. (previously presented): A light-emitting transistor according to claim 1 wherein the organic semiconductive layer comprises a semiconductive polymer.

14. (previously presented): A light-emitting transistor according to claim 1 wherein the organic semiconductive layer comprises a semiconductive oligomer.

15. (previously presented): A light-emitting transistor according to claim 1 wherein the organic semiconductive layer comprises a semiconductive small molecule.

16. (previously presented): A light-emitting transistor according to claim 1 wherein said electron injecting electrode is made from a different material than said hole injecting electrode.

17. (previously presented): A light-emitting transistor according to claim 1 wherein said electron injecting electrode is made from the same material as said hole injecting electrode.

18. (previously presented): A light-emitting transistor according to claim 1 wherein the surface of said electron injecting electrode that is in contact with the organic semiconductive layer has a different surface composition than the surface of said hole injecting electrode in contact with the organic semiconductive layer.

19. (previously presented): A light-emitting transistor according to claim 1 wherein said electron injecting and hole injecting electrodes have different workfunctions.

20. (original): A light-emitting transistor according to claim 19, wherein the workfunction of the hole injecting electrode is larger by more than 0.5 eV than that of the electron injecting electrode.

21. (original): A light-emitting transistor according to claim 19, wherein the workfunction of the hole injecting electrode is larger by more than 1.5 eV than that of the electron injecting electrode.

22. (currently amended): An ambipolar, light-emitting transistor comprising: an organic gate dielectric layer; an organic semiconductive layer forming an interface with the organic gate dielectric layer; ~~in contact with~~ an electron injecting electrode and a hole injecting electrode in contact with the semiconductive layer, separated by a distance L defining the channel length of the transistor, ~~in which~~ and arranged for travel of charge carriers along the interface between the organic gate dielectric layer and the organic semiconductive layer, and wherein a zone of the

organic semiconductive layer from which the light is emitted is located more than L/10 away from both the electron as well as the hole injecting electrode.

23. (currently amended): An ambipolar, light-emitting transistor comprising: an organic gate dielectric layer; an organic semiconductive layer forming an interface with the organic gate dielectric layer; ~~in contact with~~ an electron injecting electrode and a hole injecting electrode~~, in which~~ in contact with the semiconductive layer and arranged for travel of charge carriers along the interface between the dielectric layer and the semiconductive layer, and wherein a zone of the organic semiconductive layer from which the light is emitted is located more than 1 μm away from both the electron as well as the hole injecting electrode.

24. (currently amended): An ambipolar, light-emitting transistor comprising: an organic gate dielectric layer; an organic semiconductive layer forming an interface with the organic gate dielectric layer; ~~in contact with~~ an electron injecting electrode and a hole injecting electrode in contact with the organic semiconductive layer ~~in which~~ and arranged for travel of charge carriers along the interface between the organic gate dielectric layer and the organic semiconductive layer, and wherein a zone of the organic semiconductive layer from which the light is emitted is located more than 5 μm away from both the electron as well as the hole injecting electrode.

25. (previously presented): An ambipolar, light-emitting transistor as claimed in claim 22, comprising an organic gate dielectric layer forming an interface with the organic semiconductive layer, characterised in that the bulk concentration of trapping groups in the gate dielectric layer is less than $10^{18}cm^{-3}$, where a trapping group is a group having (i) an electron affinity EA_x greater than or equal to $EA_{semicond}$ and/or (ii) a reactive electron affinity EA_{rxn} greater than or equal to $EA_{semicond.}$-2eV.

26. (previously presented): A method for biasing a light-emitting transistor as defined in claim 1, wherein a bias voltage applied to a control gate electrode of the transistor is selected to be in between a bias voltage applied to the hole injecting electrode and a bias voltage applied to the electron injecting electrode.

27. (previously presented): A method for operating a light-emitting transistor according to claim 1, wherein a bias voltage applied to a control gate electrode, a bias voltage applied to the hole injecting electrode, and a bias voltage applied to the electron injecting electrode are adjusted to move the recombination zone to a desired position along the channel of the transistor.

28. (canceled)

29. (currently amended): A method of making a light-emitting transistor as defined in claim 1, comprising defining said electron-injecting and hole-injecting electrodes to comprise shadow-mask evaporation.

30. (currently amended): A method of making a light-emitting transistor as defined in claim 1, comprising defining said electron-injecting and hole-injecting electrodes to comprise surface-energy assisted printing.

31. (currently amended): A method of making a light-emitting transistor as defined in claim 1, comprising defining said electron-injecting and hole-injecting electrodes to comprise self-aligned printing.

32. (currently amended): A method of making a light-emitting transistor as defined in claim 1, comprising defining said electron-injecting and hole-injecting electrodes to comprise evaporation at an oblique angle.

33. (currently amended): A method of making a light-emitting transistor as defined in claim 1, comprising defining said electron-injecting and hole-injecting electrodes to comprise underetching of a metal film protected by a resist pattern.

34. (canceled)

35. (previously presented): A circuit, complementary circuit, logic circuit or a display including a light-emitting transistor as defined in claim 1.

36. and 37. (canceled).